NMC
Committed to Nuclear Excellence

Kewaunee Nuclear Power Plant
Operated by Nuclear Management Company, LLC

January 7, 2005

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U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Kewaunee Nuclear Power Plant
Docket 50-305
License No. DPR-43

Nuclear Regulatory Commission Bulletin 2003-02: Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity – Results of Inspections Conducted During Kewaunee Nuclear Power Plant Refueling Outage R-27

Reference: 1) Letter from Nuclear Management Company, LLC to Document Control Desk, "Nuclear Regulatory Commission Bulletin 2003-02: Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity – 90-day Response", dated November 10, 2003

In Reference 1, the Nuclear Management Company, LLC (NMC) submitted the required 90-day response to Nuclear Regulatory Commission (NRC) Bulletin 2003-02 for the Kewaunee Nuclear Power Plant (KNPP). This response discussed the visual inspections to be performed of the KNPP Lower Reactor Pressure Vessel (RPV) dome, including the Bottom-Mounted Instrumentation (BMI) penetrations, during the next refueling outage.

During the recent KNPP R-27 refueling outage, inspections discussed in Reference 1 were completed. The purpose of this letter is to provide the results of these inspections, as requested pursuant to Requested Information item (2) in NRC Bulletin 2003-02, within 60 days of plant restart.

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

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N490 Highway 42 • Kewaunee, Wisconsin 54216-9511
Telephone: 920.388.2560

I declare under penalty of perjury that the foregoing is true and correct. Executed on January 7, 2005.

Thomas Coutu
Site Vice President, Kewaunee Nuclear Power Plant
Nuclear Management Company, LLC

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Kewaunee, USNRC
Senior Resident Inspector, Kewaunee, USNRC

ENCLOSURE 1

NMC RESPONSE TO NRC BULLETIN 2003-02: LEAKAGE FROM REACTOR PRESSURE VESSEL LOWER HEAD PENETRATIONS AND REACTOR COOLANT PRESSURE BOUNDARY INTEGRITY

RESULTS OF INSPECTIONS CONDUCTED DURING KNPP REFUELING OUTAGE R-27

OPERATING LICENSE NO. DPR-43, DOCKET NO. 50-305

Requested Information:

Within 60 days of plant restart following the next inspection of the RPV lower head penetrations, the subject PWR addressees should submit to the NRC a summary of the inspections performed, the extent of the inspections, the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits and any corrective actions taken as a result of indications found.

NMC Response:

A preliminary Direct VT-1 and VT-3 Visual Examination of the Reactor Vessel Bottom Head Bottom Mounted Instrumentation (BMI) penetration area was performed on October 11, 2004 with the Insulation installed. There were no indications of boric acid residue, and the condition of the BMI penetrations was unchanged since that observed during the Spring 2003 Refueling Outage.

A partial visual examination of the Reactor Vessel Bottom Head bare-metal was performed on October 11, 2004. A final Direct VT-1 and VT-3 Visual Examination was performed on October 13, 2004, and was witnessed by an NRC Region III Inspector. The purpose of the exam was to assess the condition of the Reactor Vessel Bottom Head bare-metal located around the 36 BMI penetrations, and specifically to look for Reactor Coolant System (RCS) pressure boundary leakage. No evidence of RCS pressure boundary leakage was observed. No corrective actions were deemed necessary based on the results of these VT examinations.

During performance of the examination, several areas of white streaking and rust colored residue were observed on the bare-metal of the Reactor Vessel Bottom Head. Cleaning was performed to remove the areas of white streaking and the rust colored residue, and photographs were taken of the as-left bare-metal of the Reactor Vessel Bottom Head located around the 36 Bottom Mounted Instrumentation penetrations on November 20, 2004. Copies of these photographs have been provided to NRC Region III.

A chemical analysis was performed on samples of the white material and residue observed on the Reactor Vessel Bottom Head bare-metal, at five locations. This analysis determined that the material & residue contained no short-lived radionuclides, and was not indicative of an active RCS pressure boundary leak.